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ABSTRACT

In this article the lecture is examined as a teaching method. The elements of a good lecture are discussed as well as the negative aspects and pitfalls involved in using this means of instruction. Information is provided that may be helpful to instructors interested in improving the quality of their teaching with better lecturing techniques. (JD)

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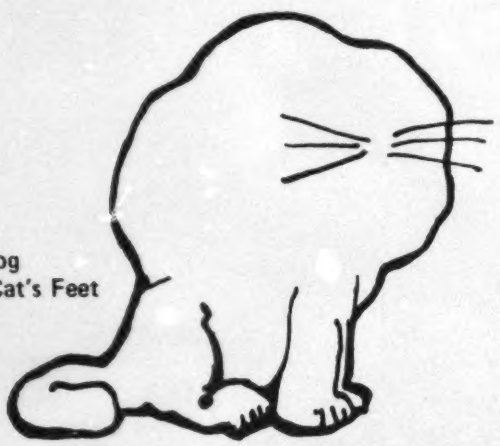
"To Lecture or Not to Lecture"

Probably the greatest reward in trying new teaching techniques or improving older ones is the excitement or enthusiasm that these efforts can bring to you and your students. To learn how to enjoy and get involved with learning can be an exhilarating experience for a student. After all, college students have had many years of experience learning how to be passive, obedient learners. They need an opportunity to change that passive role by getting as actively involved with learning as they were when they were wide-eyed toddlers. By making your lectures good lectures and by appropriately using alternative teaching techniques you can give students that opportunity.

This paper focuses on how and when lecturing can be used effectively in college teaching. The lecturing process, as it is used and could be used in college teaching, will be explored by asking what is lecturing, when can it be a good teaching technique, what are the elements of a good lecture, and what are some alternatives to lecturing?

What is lecturing?

An encyclopedia is a source of a lot of valuable, interesting, and useful information about the world. So is a college teacher. An encyclopedia presents information in an easily accessible, easily understood manner. So do many lecturers. But did you ever decide to read the whole encyclopedia and wind up stopping at "Aardvark?"



A Fog on Cat's Feet

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From Supreme Being To Being Super

What keeps us from getting beyond "Aardvark" may also keep students from maintaining their interest in lectures. It's often very difficult to get students actively involved in learning when they spend most of their time sitting and listening. Even with question-asking and minimal discussion encouraged, the communication process in lecturing is often one-way communication from the lecturer to the students and not really vice versa. One-way communication, whether between the *Britannica* and you or between lecturer and students, can be a de-energizing process.

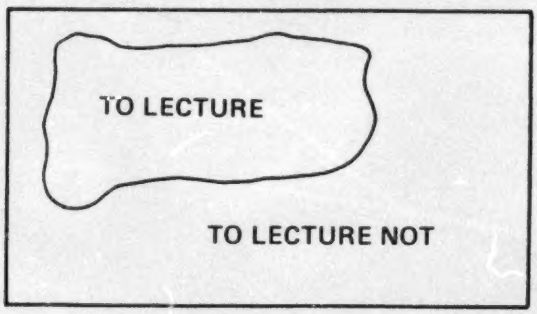
Another aspect of lecturing, in addition to the type of communication which takes place, is the type of climate or atmosphere that usually develops in a course in which lecturing is a frequent teaching method. Just think of the word "lecturing." If you spend a few seconds now and let your imagination wander, you just might find yourself picturing a knowledgeable scholar in cap and gown, holding a microphone and quietly but haughtily discoursing behind a lectern. The passive learners in front of him are listening, pen and notebook in hand, with a mixture of awe, fear, and respect. The lecturer is in control and in the midst of a formal atmosphere which is very difficult to chisel away even by being casual, unauthoritarian, or downright chummy.

Such a scenerio is much more ivy-covered, solemn, and sterile than today's typical college classroom. But, perhaps from this old stereotype emerges a formal authoritarian atmosphere which can envelope a lecture course like a fog on cat's feet. An invisible fence between teacher and students often forms, which students have learned to be afraid to climb with their questions and their feelings. Sometimes teachers and students do break through the fence but they may be left wondering: Do good fences make good learners?

When can lecturing be a good teaching technique?

The answer to this question is, obviously, sometimes. But that is not answer enough. Lecturing has been compared through research in efficiency and effectiveness with discussion classes of all sorts, and this information can be very useful.

McKeachie has reviewed much of this research (*Teaching Tips*, D. C. Heath Company, 1969). He concluded that lecturing sometimes, perhaps because of an increased rate of transmission, help students learn more detailed information faster than they do in discussion classes. However, and this is a big however, most students enjoy discussion classes more and they seem to learn complex intellectual skills, like how to develop concepts and solve problems, better in discussion classes.



Whether a teacher lectures or conducts discussion classes or uses any alternative technique (see the last section of this paper on alternatives to lecturing) will depend, in part, on his goals in teaching. If one of your goals is to teach some difficult problem-solving skills, you might be more likely to achieve that goal by discussing with, rather than lecturing to, your students.

Deciding on the goals for a course may not always be a simple or a straightforward process. However, as Robert Mager points out in his book, *Goal Analysis*, (Fearson Publishers, 1972) by carefully defining teaching goals a teacher can describe and assess what is really meant by success in any course. Knowing what you want to achieve and knowing what your students want to achieve might help you make better decisions about how to get there. Perhaps some of the questions listed below will help you examine some of your own goals as a teacher:

Do I want students to get to know (as evidenced for example, by their responses to my questions on tests and in class) a lot of detailed information in this class?

Do I want students to acquire skills in problem solving, concept development, laboratory work, teaching, etc? How am I going to measure the types of skills that are acquired and those that still need to be worked on?

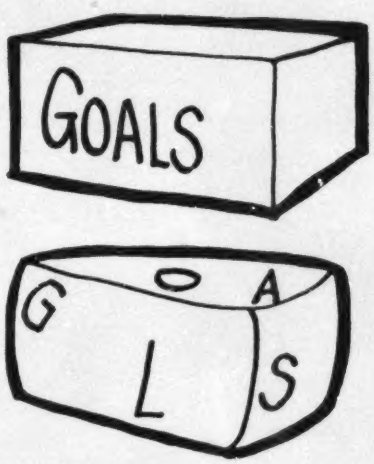
Do I feel it is important for students to learn something about each other (like how to work cooperatively and how to use each other as intellectual resources) in this class?

How willing am I to let students have a say in what happens in this class? (Is what I want for this class going to determine what happens here or are they going to be able to determine what we do in this class?)

How important is it to me that students enjoy this class?

Perhaps, if a teacher decided that students should know a lot of detailed information that isn't easily obtained from the readings alone, that getting students to enjoy course is of less than paramount importance, and that they could learn about each other somewhere else, then he might decide to lecture quite a bit. Teachers whose goals are not like these might choose to lecture less frequently, or not at all.

When a new teacher does decide to lecture for the first time he might search his memory, as I did not long ago, for those lecturers who sparkled particularly brightly. If the images and techniques of those lecturers aren't too musty and overgrown with neural cobwebs, then some of their mannerisms and vocabulary might be used. In the next section a discussion of how to lecture well attempts to convey something about the components, if not the flavor, of good lecturing.



What are the elements of a good lecture?

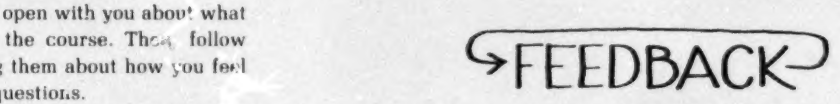
The first element of good lecturing to be discussed might best be considered an element of a good lecturer. This element is the willingness of the lecturer to get lots of feedback, or information, from the audience. Since lecturing is usually a form of one-way and not two-way communication a good lecturer recognizes the necessity of gathering information from the audience about how well the talk is being understood and about whether the presentation is being liked or disliked. A good lecture cannot be made very easily unless there is some way, built into the lecturing itself, for the audience to make inputs to the lecturer.

One common way to get some of this feedback is to ask silent questions to oneself while lecturing. Questions like: How many students are asking questions (if that is allowed)? How excited do they seem? How intense are their questions? How much do they laugh at my jokes, or "ooh" and "aah" at my usually clever points? How many students are sleeping?

Unfortunately the answers to these questions are likely to be misleading. Since the lecturer is part of the scene he observes and because he wants to see certain things happening in class, he is a biased observer: He might miss seeing some things while clearly focusing on others. In my own experience I remember being surprised to find out how biased I could be. I was particularly happy with a lecture I had given in an introductory psychology course about personality and I.Q. testing. I had managed to integrate and summarize a huge amount of information in what I considered to be an interesting and clearly presented manner. The students asked lots of questions and were always looking at me and they laughed at all the right times. After the class I was chagrined to discover that their questions were derived from their utter confusion and their laughter was evidence of their frustration and anxiety! I was glad, although disappointed, that the several students who talked with me after class felt comfortable enough to give me such bad news.

Talking with students after class is only one of a number of ways to increase the amount and frequency of feedback a lecturer can receive about his lecturing. The following list of additional ways to increase feedback is offered as some hints which have been used effectively by many lecturers:

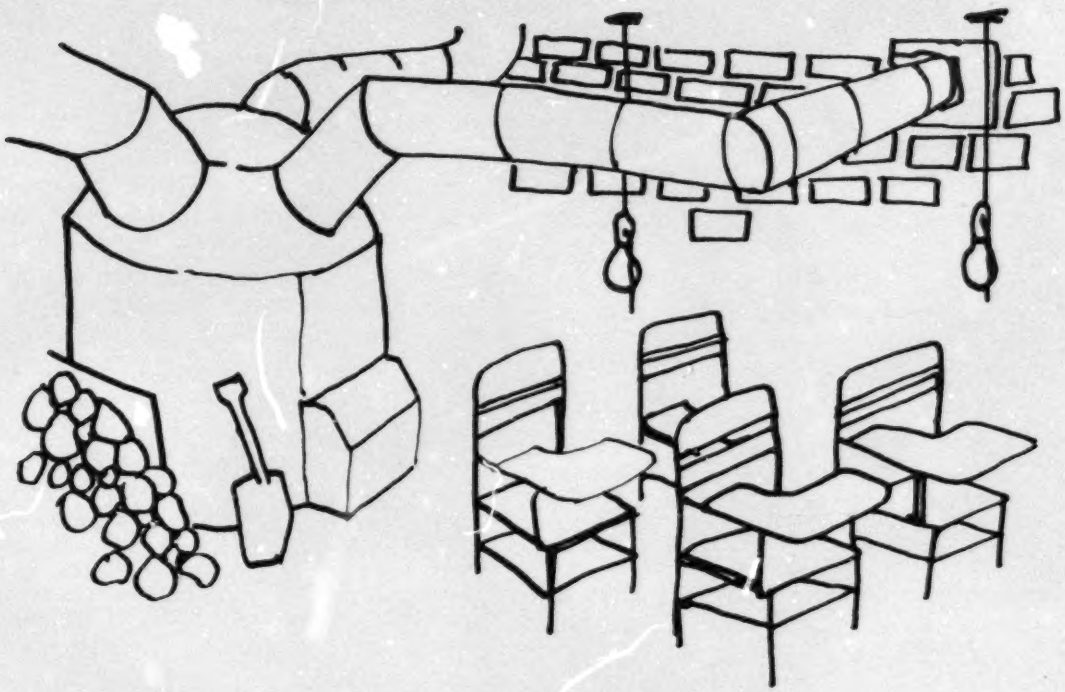
1. Ask the students to be open with you about what they like and don't like in the course. Then follow that up by frequently telling them about how you feel about their comments and questions.
2. Be available at regular times in your office, before and after class, and maybe even for an occasional lunch, dinner, or party with some of the students. Let the students know about this availability.
3. Allow some time during each class session for questions and discussion. Also, even in extremely large classes (500 or more) you might be able to deal with questions and issues as they occur to the student rather than at the end of the class period.
4. Periodically (every week or two) hand out brief questionnaires, which can be completed anonymously, about what students liked or didn't like in the lectures or the class.
5. Set up a student lecture committee composed of three to five students who agree to solicit feedback from the class. Meet with the group regularly (every week or two). Students find it easier to make critical comments under the guise of, "One of the students said..."



6. Occasionally, or frequently if you have the time and energy, tape-record your lecture (use video tape if that is available to you). Go over the tape and note if you are not varying the pitch and volume of your voice enough, if you are doing any stereotyped behaviors (such as pacing back and forth or saying "OK" or "uh" a lot of the time), and if you are not making direct eye contact with your audience.
7. Make an agreement with a colleague or graduate student to occasionally sit in on one another's classroom and exchange favorable and unfavorable comments on the content and style of the lecturing. This kind of peer feedback sometimes works better when the person giving feedback says several favorable things (what was liked) first, and then several less favorable things (what was disliked).

Getting and then constructively using feedback about lecturing certainly helps develop good lecturing. The next element of quality lecturing to be discussed is about the effective use of the classroom environment.

Classrooms are frequently hot and stuffy and quite often they have too little room, too much room, poor lighting, immovable chairs, or are in a very noisy location. Although I've enjoyed swapping fantasies with other teachers about how to explosively and radically alter the classroom structures at the University of Cincinnati, these discussions have not helped me create better classroom ecology.



I've found that a few common-sense things can actually be done. Checking out the designated room before classes begin can increase the likelihood of getting a room which is about the right size, which has adequate lighting, and which even has moveable chairs. Airing out the room before class starts can significantly reduce the stuffiness. Using the moveable chairs in a semi-circular seating arrangement really helps keep the students looking at each other and looking at the lecturer. Students under these circumstances have a harder time being unattentive because of the increased eye contact with each other. Their increased attention could also help stimulate the lecturer to be even more stimulating.

Making the classroom environment conducive for learning and effectively using feedback about lectures can certainly form the foundations of a good lecture course. However, the strength of the course structure in addition to being dependent on how well the content matches student needs and ability-levels, is probably most affected by how well the lecturing is geared to the ways people learn best. Lecturing can be quite effective if the lecturer is aware of some aspects of human learning like attention, activity in learning, and learning in context and through repetition.

In order to facilitate students' learning during a lecture, a lecturer has to struggle with ways to keep student's attention. Varying the pitch and volume of one's voice, avoiding stereotyped behaviors (like repeatedly saying "OK" or constantly pacing back and forth), and being enthusiastic (moving arms around sometimes, moving to different sides of the room, and using various facial expressions) can all help the student focus his attention on the lecturer.

David Hirvela, of this university's Speech and Theater Arts department, has talked about a television-module attention span which is consonant with psychological research on human attention. According to this view of attention, students today, having been raised with television, are accustomed to taking a break during commercials (every ten to twelve minutes) for a sandwich or a coke. Therefore, a good lecturer will break up the action, or inaction as the case may be, every ten to twelve minutes by telling a quick personal, biographical, historical, and/or humorous anecdote or by using some other change-of-pace teaching device. Other such devices include using audio-visual aids, doing a brief role-playing, gaming, and allowing time for stretching and gabbing.

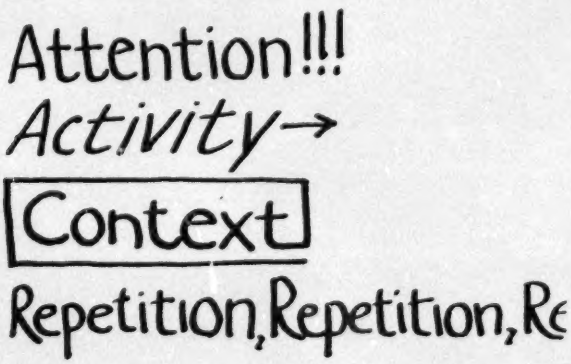
Another principle of learning which is useful to remember about teaching is that active learning works better to maintain attention and excitement than passive learning. Francis Robinson, in his book *Effective Study*, has presented evidence indicating that when students try to solve problems and search for answers to questions rather than simply reading, they remember more of what they read and they perform better on comprehension tests. Since it makes sense for facilitating learning to keep active while reading, then it probably makes sense to keep active while

listening. So, keeping students actively listening during lectures could mean posing questions or problems at the beginning of the lecture, doing experiments in class in which the whole class participates, and having students break into small buzz groups (two to four students) during class to raise questions or solve some small problems. Providing opportunities for students to do some "learning by doing" even during a lecture, can make lecturing almost as good a learning experience for the students, as it usually is for the lecturer.

Way back when we sat around with Mom and the multiplication tables, it was hard to see any useful learning method through the madness of 9 X 2 = 18, 9 X 3 = 27, and so on, forever. But, the repetition really did it (quick-what does 8 X 7 equal?). Perhaps when the third-grade teachers talked about the relationship between adding, subtracting, multiplying, and dividing, the experience of learning within a context (mathematics including adding, subtracting, etc.) was also discovered as useful, albeit painful.

Of course, the effectiveness of lecturing can also be boosted by using repetition and context to facilitate learning. Placing a brief lecture outline on the board, passing out a handout with the main points highlighted, and introducing and summarizing what is being said are some ways to repeat important points and place the material in context. Using media devices (e.g., films; slides; audio and video tapes) can also highlight important points in different ways.

I'm proposing that a lecture can be a many splendored thing if the lecturer values and behaves accordingly toward feedback, a good learning environment, and some principles of human learning (attention, active learning, and learning by repetition within a context). Variations in the types of activities and the techniques used to convey information are limited largely by the lecturer's imagination and by the difficulties everyone has to contend with in doing something a little different. If Dr. X starts using a multimedia presentation and warm-up exercises in a course, then Drs. Y and Z might try to convince X of "the absurdity of it" or "the childishness of it." Drs. Y and Z might be anxious about how much students seem to like X's course (but not theirs) and they might try to get X to change or they might try to discredit X. Dr. X must decide just how important teaching effectively really is: Is it worth it? That is a tough question.



Another limitation in the instructor's teaching repetoire can come from lack of information. Before deciding fairly whether to lecture or not to lecture an instructor must have some familiarity with alternative teaching methods. The alternatives discussed briefly in the next section are just a few of the possibilities.

What are some alternatives to lecturing?

When teachers decide to lecture they are also deciding *not* to teach in alternative ways. In making a fair choice about how to teach a course there are some benefits to thinking hard about the goals of that course (see the section, - When is Lecturing a Good Teaching Technique?) and then choosing methods which will be helpful in reaching those goals.

Choosing an appropriate method means picking that method from among at least some alternatives. Some alternatives to lecturing are familiar to all instructors. For example, everyone who has been through college knows about seminar, laboratory, and lecture courses with recitation sections. However, these methods are just a scant few of the possible ways to teach. Alternatives, a few anyway, to the more common techniques are briefly outlined below:

Contract teaching: At the start of the course a student contracts or makes agreement with instructor on how much work and what kind of work he is to do in a course. The agreement involves the student doing certain mutually agreed upon things (e.g., projects, exams, class attendance), and it involves the instructor doing certain mutually agreed upon things (e.g., lectures on certain topics; uses a quick, open feedback system; gives an A for a certain amount of work done). If the student completes his part of the contract, then the instructor should complete his part and give the student the agreed upon grade.

Peer teaching: The Learning Cell and Teacher-of-the-Day techniques are examples of this. In the Learning Cell students are divided into pairs and then ask each other questions, provide summaries of materials, and review materials together. In Teacher-of-the-Day students are provided with the opportunity to teach each other some content areas within a small or large classroom.

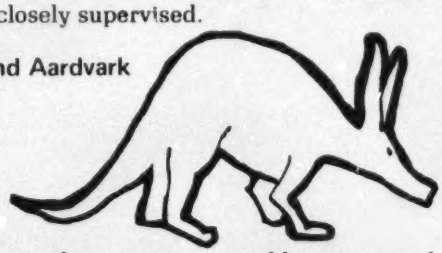
Modular instruction: Subject matter is broken into many units, covering major content areas which are usually large (several hours to complete). Students take pre- and post- tests with each module, and they study the units in any sequence they so choose.

Simulation techniques: Course is taught through devices which attempt to mimic the real world; for example, students break up into "families" to work through family problems; into a complex criminal justice organization; into an economic system or a ghetto environment or an imitation 16th Century French society. Thus a sort of role-playing and group therapy, with the idea of applying book-learning in a controlled situation in the classroom.

Programmed self-instruction (Keller Plan): Students individually pace selves and work on small units of coursework. Printed study guides used and non-mandatory lectures sometimes given. Students take exams when they feel ready to demonstrate mastery of a unit; immediately after taking exam they review it with a tutor to discuss any possible problems.

Computer assisted instruction (CAI): Students follow a course of study, determined by their progress in answering questions from a computer which has been appropriately programmed. Could involve having computer memory banks available for students to ask questions about certain topics via an open terminal.

Field teaching and practicums: Students learn by actually doing something related to their studies (e.g., practicum in counseling, surveying, actual business letter writing). These experiences "in the field" are usually closely supervised.



Of course there are innumerable ways in which a college course can be taught. Many texts, such as *The Changing College Classroom* by Runkel, Harrison, and Runkel (Jossey-Bass, Inc., 1972), and journals (like *Improving University Teaching* and *Teaching of Psychology)* about teaching in higher education offer how-to-do-it hints and reports about these methods and many other possible techniques. These sources and many others are available in the IRTHE library (441 French Hall). Also, the IRTHE staff (X 2228) are eager to talk with faculty members and teaching assistants who are interested in alternative teaching techniques or who would like to discuss any aspects of their own teaching.

To summarize, this paper has attempted to raise some questions and provide some information which might be helpful to instructors interested in improving the quality of their teaching. Lecturing was described as a form of one-way communication which does not, in its purest form, allow for much feedback between the lecturer and the audience. However, even though feedback can be minimal during a lecture, lecturing can be a useful way to transmit a lot of information to a large group. Deciding when to lecture was discussed as a process involving examination of the goals of a course. If teaching complex skills and cooperation are not part of course goals, then lecturing may be an especially valuable teaching technique. Lecturing effectively was considered a process which included getting feedback from students, using an appropriate classroom environment, and working to maximize learning (e.g., repeating important points; placing information within a context; using effective techniques to get students to attend to what is being said).

In the final section the fact that deciding to lecture involves a decision about not conducting the course in alternative ways was highlighted and several possible alternatives to lecturing were outlined.

For richer or poorer the lecture is, and always has been, the mainstay of college teaching. It can be a truly exciting cognitive and personal experience if it is done well. It can be boring and intellectually deadening if it is done poorly. Considering how to lecture well and whether to lecture or not to lecture can be an important step towards improving the quality of your teaching. Acting upon your reflections, while risky and difficult, may just re-open the eyes of some students and allow them to fully re-experience the pleasure and excitement of learning.

—Dan Kirschenbaum